



SEQUENCE LISTING

<100> Hellinga, Homme W.  
Sloan, David J.

<120> NOVEL REAGENTS FOR AFFINITY-PURIFICATION OF ANTIBODY FRAGMENTS

<130> Docket No. 180-106 Sequence Listing

<160> 30

<170> PatentIn Ver. 2.0

<210> 1

<211> 195

<212> DNA

<213> Streptococcus sp.

<220>

<221> CDS

<222> (-1)..(195)

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Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Lys	
			20						25					30		
caa	tac	gct	aac	gac	aac	ggt	gtt	gac	ggt	gaa	tgg	act	tac	gac	gat	144
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp	
			35					40						45		
gcg	act	aag	acc	ttt	aca	gtt	act	gaa	cat	cac	cat	cat	cac	taa	gct	192
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His		Ala	
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tga															195	

<210> 2

<211> 62

<212> PRT

<213> Streptococcus sp.

<400> 2

Met	Thr	Thr	Tyr	Lys	Leu	Ile	Leu	Asn	Gly	Lys	Thr	Leu	Lys	Gly	Glu
-1	1				5				10					15	
Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Lys
			20						25					30	
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp
			35					40					45		

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
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Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
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Cys Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
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<210> 4  
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<400> 4

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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Thr Thr Thr Glu Ala Val Asp Ala Ala Ala Ala Glu Lys Val Phe Lys  
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Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

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-1 1 5 10 15

aca act act gaa gct gtt gat gct gct act gca gcg aaa gtc ttc aaa	96
Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Ala Lys Val Phe Lys	
20 25 30	
caa tac gct aac gac aac ggt gtt gac ggt gaa tgg act tac gac gat	144
Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp	
35 40 45	
gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct	192
Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala	
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tga	195

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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Ala Lys Val Phe Lys	
20 25 30	
Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp	
35 40 45	
Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His	
50 55 60	

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Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu	
-1 1 5 10 15	
aca act act gaa gct gtt gat gct gct act gca gaa gcg gtc ttc aaa	96
Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Ala Val Phe Lys	
20 25 30	
caa tac gct aac gac aac ggt gtt gac ggt gaa tgg act tac gac gat	144
Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp	
35 40 45	

gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
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tga 195

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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Ala Val Phe Lys  
                   20                          25                          30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
                   35                          40                          45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
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<400> 9

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 Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
 -1 1                  5                          10                          15

aca act act gaa gct gtt gat gct gct act gca gaa aaa gtc ttc gcg 96  
 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Ala  
                   20                          25                          30

caa tac gct aac gac aac ggt gtt gac ggt gaa tgg act tac gac gat 144  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
                   35                          40                          45

gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
           50                          55                          60

tga 195

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Met	Thr	Thr	Tyr	Lys	Leu	Ile	Leu	Asn	Gly	Lys	Thr	Leu	Lys	Gly	Glu
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Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Ala
			20						25					30	
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp
		35						40					45		
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His		
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Met	Thr	Thr	Tyr	Lys	Leu	Ile	Leu	Asn	Gly	Lys	Thr	Leu	Lys	Gly	Glu	
-1	1				5					10					15	
aca	act	act	gaa	gct	gtt	gat	gct	gct	act	gca	gaa	aaa	gtc	ttc	aaa	96
Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Lys	
			20						25					30		
caa	tac	gct	gcg	gac	aac	ggt	gtt	gac	ggt	gaa	tgg	act	tac	gac	gat	144
Gln	Tyr	Ala	Ala	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp	
		35						40					45			
gcg	act	aag	acc	ttt	aca	gtt	act	gaa	cat	cac	cat	cat	cac	taa	gct	192
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His		Ala	
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tga																195

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Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
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Gln Tyr Ala Ala Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 13

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<212> PRT

<213> Streptococcus sp.

<400> 13

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
20 25 30

Gln Tyr Ala Asn Asp Asn Gly Val Ala Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 14

<211> 62

<212> PRT

<213> Streptococcus sp.

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Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
20 25 30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Ala Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 15

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<212> DNA

<213> Streptococcus sp.

<220>  
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<400> 15  
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 -1 1 5 10 15  
 aca act act gaa gct gtt gat gct gct act gca gaa aaa gtc ttc aaa 96  
 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
 20 25 30  
 caa tac gct aac gac aac ggt gtt gac ggt gaa gcg act tac gac gat 144  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Ala Thr Tyr Asp Asp  
 35 40 45  
 gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
 50 55 60  
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<210> 16  
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<400> 16  
 Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
 20 25 30  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Ala Thr Tyr Asp Asp  
 35 40 45  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
 50 55 60

<210> 17  
 <211> 195  
 <212> DNA  
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<220>  
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 <222> (-1)..(195)

<400> 17  
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 Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
 -1 1 5 10 15

aca act act gaa gct gtt gat gct gct act gca gaa aaa gtc ttc aaa 96  
 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
                   20                  25                  30

caa tac gct aac gac aac ggt gtt gac ggt gaa tgg gcg gcg gac gat 144  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Ala Ala Asp Asp  
                   35                  40                  45

gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
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tga 195

<210> 18  
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 <212> PRT  
 <213> Streptococcus sp.

<400> 18

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Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
                   20                  25                  30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Ala Ala Asp Asp  
                   35                  40                  45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
                   50                  55                  60

<210> 19  
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 <212> DNA  
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<220>  
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 <222> (-1)..(195)

<400> 19

atg act act tac aaa tta atc ctt aat ggt aaa aca ttg aaa ggc gaa 48  
 Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
 -1 1 5 10 15

aca act act gaa gct gtt gat gct gct act gca gtt aaa gtc ttc aaa 96  
 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Val Lys Val Phe Lys  
                   20                  25                  30

caa tac gct aac gac aac ggt gtt gac ggt gaa tgg act tac gac gat 144  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
                   35                  40                  45



gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
           50                          55                          60

tga 195

<210> 20  
 <211> 62  
 <212> PRT  
 <213> Streptococcus sp.

<400> 20

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
 -1 1 5 10 15

Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Val Lys Val Phe Lys  
           20                          25                          30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
           35                          40                          45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
           50                          55                          60

<210> 21  
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 <213> Streptococcus sp.

<220>  
 <221> CDS  
 <222> (-1)..(195)

<400> 21

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 Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
 -1 1 5 10 15

aca act act gaa gct gtt gat gct gct act gca tta aaa gtc ttc aaa 96  
 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Leu Lys Val Phe Lys  
           20                          25                          30

caa tac gct aac gac aac ggt gtt gac ggt gaa tgg act tac gac gat 144  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
           35                          40                          45

gcg act aag acc ttt aca gtt act gaa cat cac cat cat cac taa gct 192  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His Ala  
           50                          55                          60

tga 195

<210> 22  
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Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Leu	Lys	Val	Phe	Lys
			20						25					30	
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp
			35						40					45	
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His		
		50						55					60		

<210> 23  
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 <212> DNA  
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<220>  
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<400> 23

atg	act	act	tac	aaa	tta	atc	ctt	aat	ggg	aaa	aca	ttg	aaa	ggc	gaa	48
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-1	1				5					10					15	
aca	act	act	gaa	gct	gtt	gat	gct	gct	act	gca	att	aaa	gtc	ttc	aaa	96
Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Ile	Lys	Val	Phe	Lys	
			20						25					30		
caa	tac	gct	aac	gac	aac	ggg	gtt	gac	ggg	gaa	tgg	act	tac	gac	gat	144
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Thr	Tyr	Asp	Asp	
			35						40					45		
gcg	act	aag	acc	ttt	aca	gtt	act	gaa	cat	cac	cat	cat	cac	taa	gct	192
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His		Ala	
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tga																195

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<400> 24

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Ile Lys Val Phe Lys  
 20 25 30  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
 35 40 45  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
 50 55 60

<210> 25  
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 <213> Streptococcus sp.

<220>  
 <221> misc\_feature  
 <222> (27)..(27)  
 <223> Xaa can be any naturally occurring amino acid, except glutamine  
 <400> 25

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
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 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Xaa Lys Val Phe Lys  
 20 25 30  
 Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
 35 40 45  
 Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
 50 55 60

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<220>  
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 <223> Xaa can be any naturally occurring amino acid, except lysine  
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 Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Xaa Val Phe Lys  
 20 25 30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 27  
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<212> PRT  
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<220>  
<221> misc\_feature  
<222> (31)..(31)  
<223> Xaa can be any naturally occurring amino acid, except lysine

<400> 27

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-1 1 5 10 15

Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Xaa  
20 25 30

Gln Tyr Ala Asn Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 28  
<211> 62  
<212> PRT  
<213> Streptococcus sp.

<220>  
<221> misc\_feature  
<222> (35)..(35)  
<223> Xaa can be any naturally occurring amino acid, except asparagine

<400> 28

Met Thr Thr Tyr Lys Leu Ile Leu Asn Gly Lys Thr Leu Lys Gly Glu  
-1 1 5 10 15

Thr Thr Thr Glu Ala Val Asp Ala Ala Thr Ala Glu Lys Val Phe Lys  
20 25 30

Gln Tyr Ala Xaa Asp Asn Gly Val Asp Gly Glu Trp Thr Tyr Asp Asp  
35 40 45

Ala Thr Lys Thr Phe Thr Val Thr Glu His His His His His  
50 55 60

<210> 29  
 <211> 62  
 <212> PRT  
 <213> Streptococcus sp.

<220>  
 <221> misc\_feature  
 <222> (43)..(43)  
 <223> Xaa can be any naturally occurring amino acid, except tryptophan  
 <400> 29

Met	Thr	Thr	Tyr	Lys	Leu	Ile	Leu	Asn	Gly	Lys	Thr	Leu	Lys	Gly	Glu
-1	1				5				10					15	
Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Lys
			20						25					30	
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Xaa	Thr	Tyr	Asp	Asp
			35						40					45	
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His	His	His
		50						55					60		

<210> 30  
 <211> 62  
 <212> PRT  
 <213> Streptococcus sp.

<220>  
 <221> misc\_feature  
 <222> (44)..(44)  
 <223> Xaa can be any naturally occurring amino acid, except threonine  
 <220>  
 <221> misc\_feature  
 <222> (45)..(45)  
 <223> Xaa can be any naturally occurring amino acid, except tyrosine  
 <400> 30

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-1	1				5				10					15	
Thr	Thr	Thr	Glu	Ala	Val	Asp	Ala	Ala	Thr	Ala	Glu	Lys	Val	Phe	Lys
			20						25					30	
Gln	Tyr	Ala	Asn	Asp	Asn	Gly	Val	Asp	Gly	Glu	Trp	Xaa	Xaa	Asp	Asp
			35						40					45	
Ala	Thr	Lys	Thr	Phe	Thr	Val	Thr	Glu	His	His	His	His	His	His	His
		50						55					60		